Page 2 of 8

Amendment and Response

Serial No.: 09/560,268 Confirmation No.: 2517 Filed: April 26, 2000

FOI: COMPOSITION FOR SELECTIVELY ETCHING AGAINST COBALT SILICIDE

# **Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of claims in the aboveidentified application:

## Listing of Claims

### 1-63. Canceled

- 64. (Currently Amended) An etching composition, the composition comprising a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water).
- 65. (Previously Presented) The etching composition according to claim 64, wherein the mineral acid is HCl and the peroxide is hydrogen peroxide.
- 66. Canceled
- 67. (Previously Presented) The etching composition according to claim 64, wherein the mineral acid is selected from the group consisting of HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, H<sub>3</sub>PO<sub>4</sub>, and HF.
- 68. (Currently Amended) An etching composition, the composition comprising a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:35 (mineral acid:peroxide:deionized water) to about 1:1:5 1:1:15 (mineral acid:peroxide:deionized water), wherein the composition has an etch rate greater than about 1000 Å/minute for cobalt at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade.
- 69. (Previously Presented) The etching composition according to claim 68, wherein the mineral acid is HCl.

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Amendment and Response

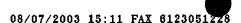
Page 3 of 8

Serial No.: 09/560,268 Confirmation No.: 2517 Filed: April 26, 2000

For: COMPOSITION FOR SELECTIVELY ETCHING AGAINST COBALT SILICIDE

- 70. (Previously Presented) The etching composition according to claim 68, wherein the peroxide is hydrogen peroxide.
- 71. (Currently Amended) The etching composition according to claim 68, wherein the ratio is in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water).
- 72. (Currently Amended) The etching composition according to claim 68, wherein the composition has an etch rate of about 50 Å/minute to about 250 Å/minute for metal nitride at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade.
- 73. (Currently Amended) An etching composition, the composition comprising a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:35 (mineral acid:peroxide:deionized water) to about 1:1:5 1:1:15 (mineral acid:peroxide:deionized water), wherein the composition has an etch rate of about 50 Å/minute to about 250 Å/minute for metal nitride at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade.
- 74. (Previously Presented) The etching composition according to claim 73, wherein the mineral acid is HCl.
- 75. (Previously Presented) The etching composition according to claim 73, wherein the peroxide is hydrogen peroxide.
- 76. (Currently Amended) The etching composition according to claim 73, wherein the ratio is in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water).





Page 4 of 8

Amendment and Response

Serial No.: 09/560,268 Confirmation No.: 2517 Filed: April 26, 2000

For COMPOSITION FOR SELECTIVELY ETCHING AGAINST COBALT SILICIDE

### 77-88. Canceled

- 89. (Currently Amended) An etching composition, the composition consisting essentially of a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:35 (mineral acid:peroxide:deionized water) to about 1:1:15 (mineral acid:peroxide:deionized water), wherein the composition has an etch rate of about 50 Å/minute to about 250 Å/minute for metal nitride at a temperature in a range of about 20 degrees centigrade to about 100 degrees centigrade and an etch rate greater than about 1000 Å/minute for cobalt at a temperature in a range of about 20 degrees centigrade.
- 90. (Previously Presented) The composition according to claim 89, wherein the mineral acid is HCl and the peroxide is hydrogen peroxide.

#### Canceled

- 92. (Currently Amended) The composition according to claim <u>89</u> 91, wherein the ratio is in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about <u>1:1:10</u> <u>1:1:15</u> (mineral acid:peroxide:deionized water).
- 93. (Previously Presented) The composition according to claim 89, wherein the mineral acid is selected from the group consisting of HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, H<sub>3</sub>PO<sub>4</sub>, and HF.
- 94. (Currently Amended) An etching composition, the composition comprising a mineral acid, a peroxide, and deionized water at a ratio in a range of about 1:1:25 (mineral acid:peroxide:deionized water) to about 1:1:10 1:1:15 (mineral acid:peroxide:deionized water), wherein the mineral acid is selected from the group consisting of HCl diluted to 37% by weight in deionized water, HNO<sub>3</sub> diluted to 70% by weight in deionized water, H<sub>2</sub>SO<sub>4</sub> diluted to 96% by weight in deionized water, H<sub>3</sub>PO<sub>4</sub> diluted to 85% by weight in deionized water, and HF diluted





Amendment and Response

Serial No.: 09/560,268 Confirmation No.: 2517 Filed: April 26, 2000 Page 5 of 8

For: COMPOSITION FOR SELECTIVELY ETCHING AGAINST COBALT SILICIDE

to 49% by weight in deionized water, wherein the peroxide is selected from the group consisting of hydrogen peroxide diluted to 29% by weight in deionized water, and ozone.

95. (Previously Presented) The etching composition according to claim 94, wherein the mineral acid is HCl and the peroxide is hydrogen peroxide.

96. Canceled

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